



Shoal Creek – Northwest Park Dam Maintenance and Modernization Project

Environmental Commission

September 1, 2021

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Dam Safety: Program Overview



- **33 dams in Austin regulated by TCEQ***
 - Height
 - Volume
 - Downstream Risk
- **TCEQ safety requirements**
 - Structural stability
 - Ability to safely pass % of PMF (Probable Maximum Flood)
- **WPD manages Dam Safety Program**
 - Inspections
 - Emergency Action Plans
 - Routine maintenance and repairs
 - CIP projects for modernization & large repairs

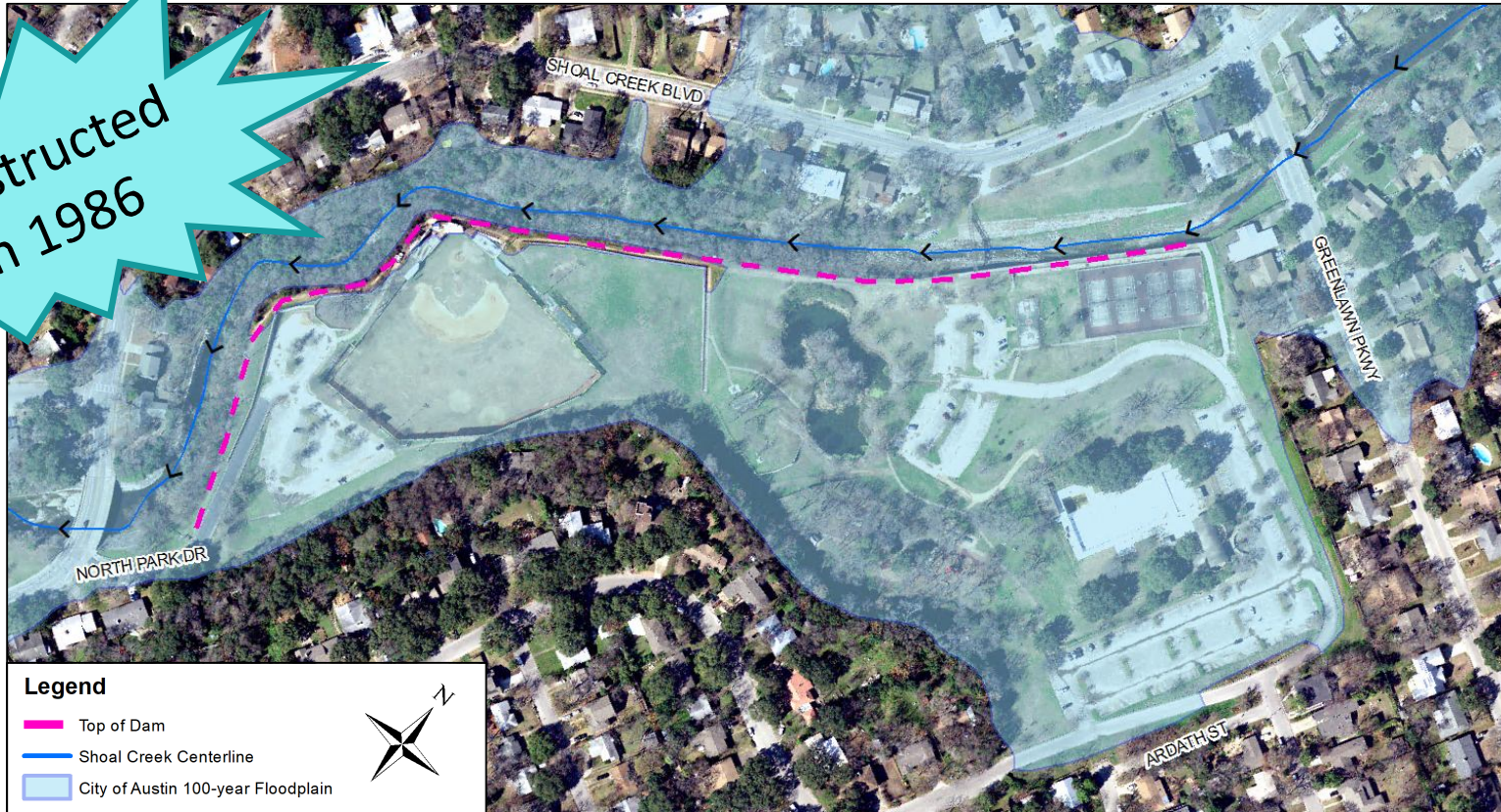
* Texas Commission on Environmental Quality



Northwest Park Dam and Regional Detention Facility

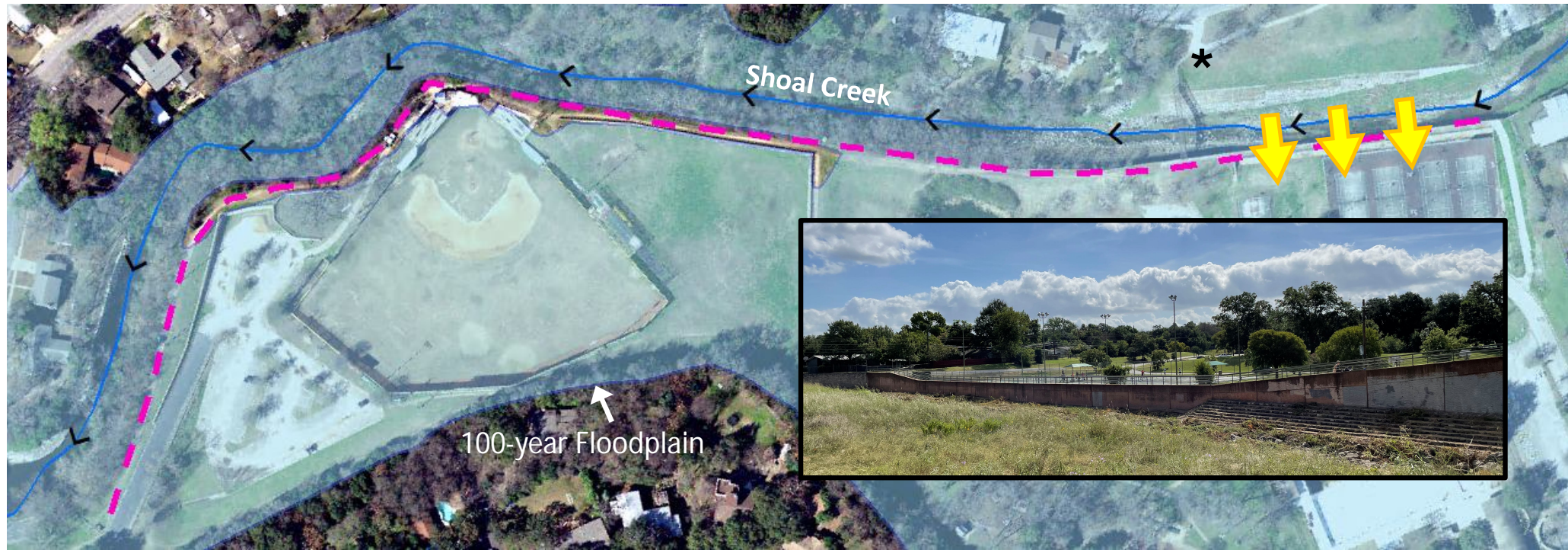


Constructed
in 1986



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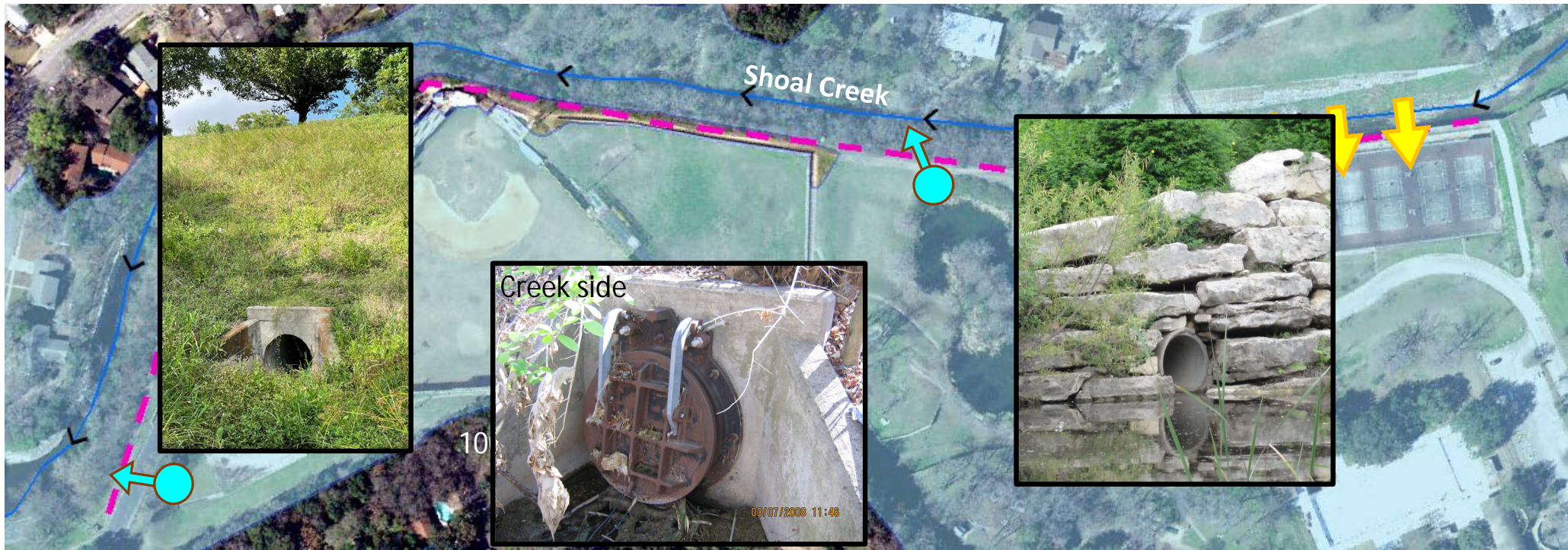
Northwest Park Dam and Regional Detention Facility: **How it Works**



— Shoal Creek - - - Top of Dam ➡ Inflow Spillway

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Northwest Park Dam and Regional Detention Facility: How it Works

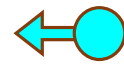


— Shoal Creek

- - - Top of Dam



Inflow Spillway



Outfall Pipe

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Northwest Park Dam and Regional Detention Facility: **How it Works**



— Shoal Creek - - - Top of Dam ➡ Inflow Spillway ←● Outfall Pipe □ Auxiliary Spillway

Northwest Park Dam and Regional Detention Facility: **How it Works**



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Dam Maintenance and Modernization Project: **Overview**



Dam Safety

- Regulated requirements for structural stability
 - Texas Commission on Environmental Quality
 - City of Austin Drainage Criteria Manual

Dam Maintenance

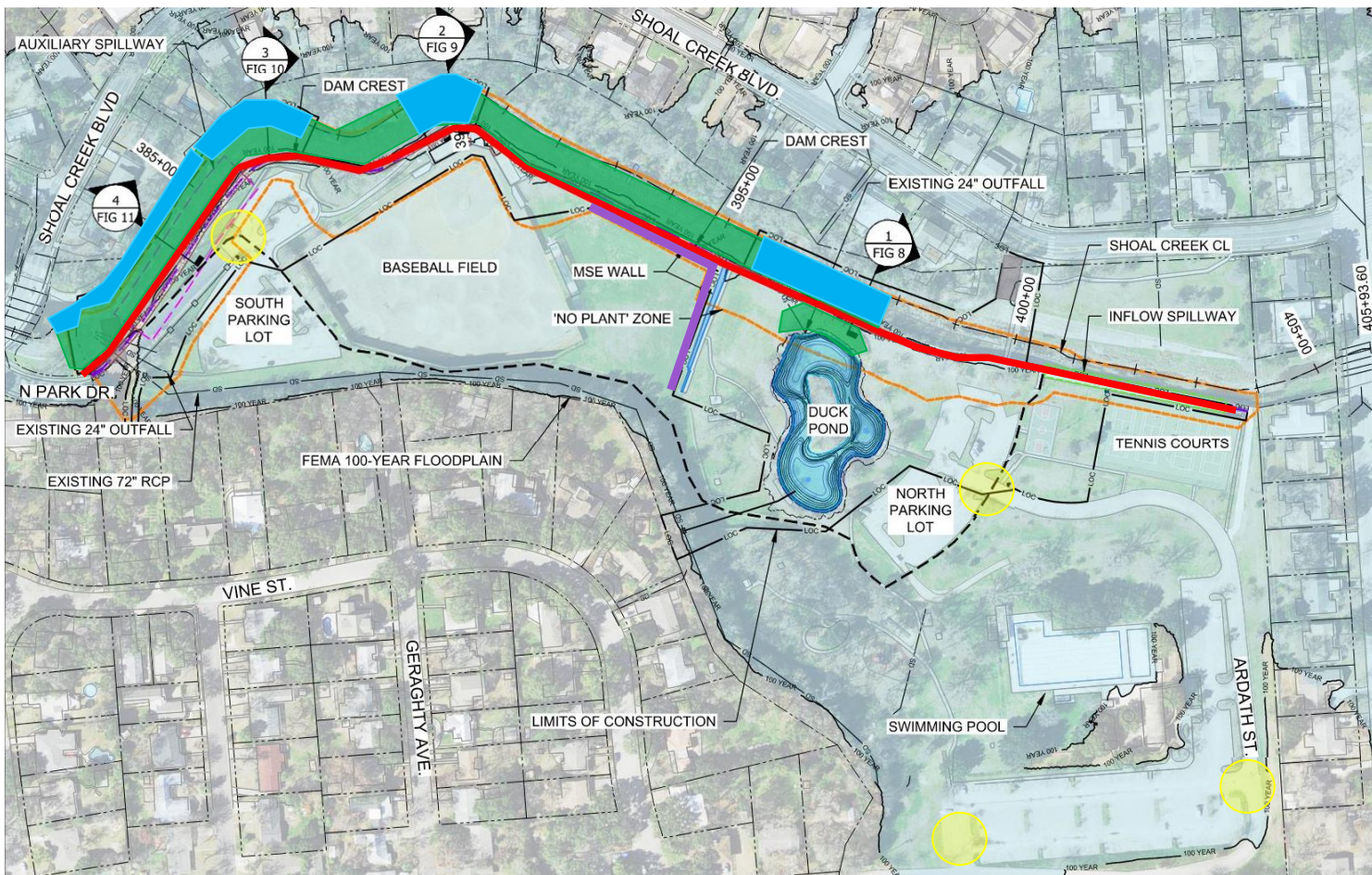
- Items that don't currently impact the stability of the dam

Park Drainage and Water Quality

- Coordinated with PARD Vision Plan
- Has no impact on the structural stability of the dam



Dam Safety Improvements



- **OVERTOPPING PROTECTION**
- **WARNING SIGNS****
- **WOODY VEGETATION MANAGEMENT AND ESTABLISHING RIPARIAN VEGETATION**
- **CREEKSIDE REHABILITATION OF THE EMBANKMENT**
- **EVALUATE THE VERTICAL MSE WALLS****

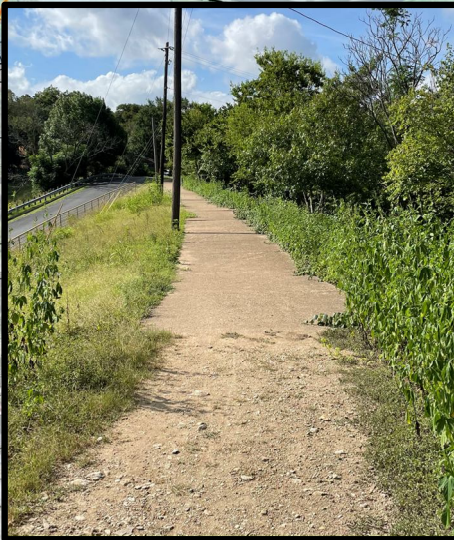
** Items Correlated with PARD's Vision Plan



Dam Safety Improvements



WATERSHED
PROTECTION



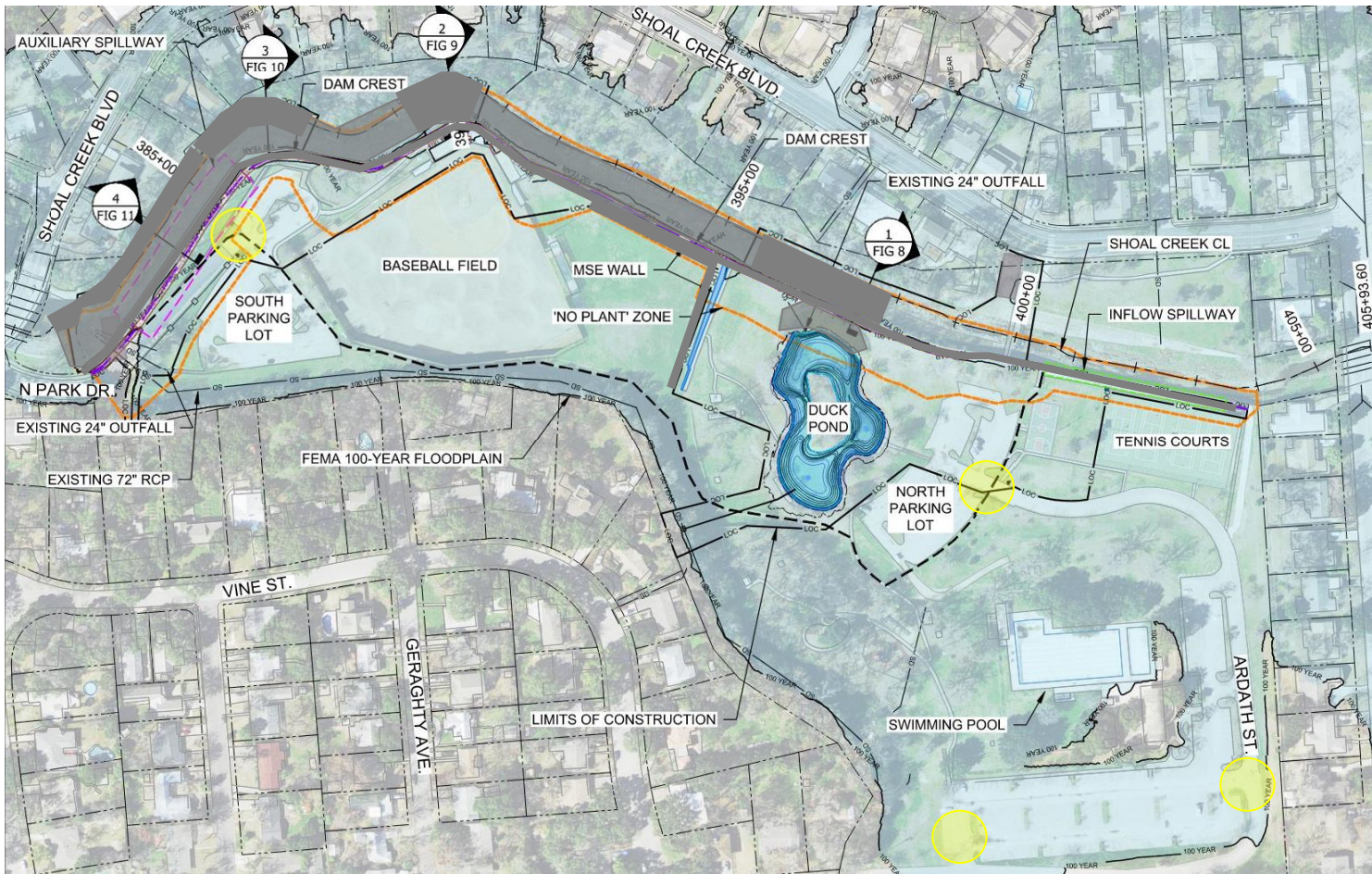
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Dam Safety Improvements

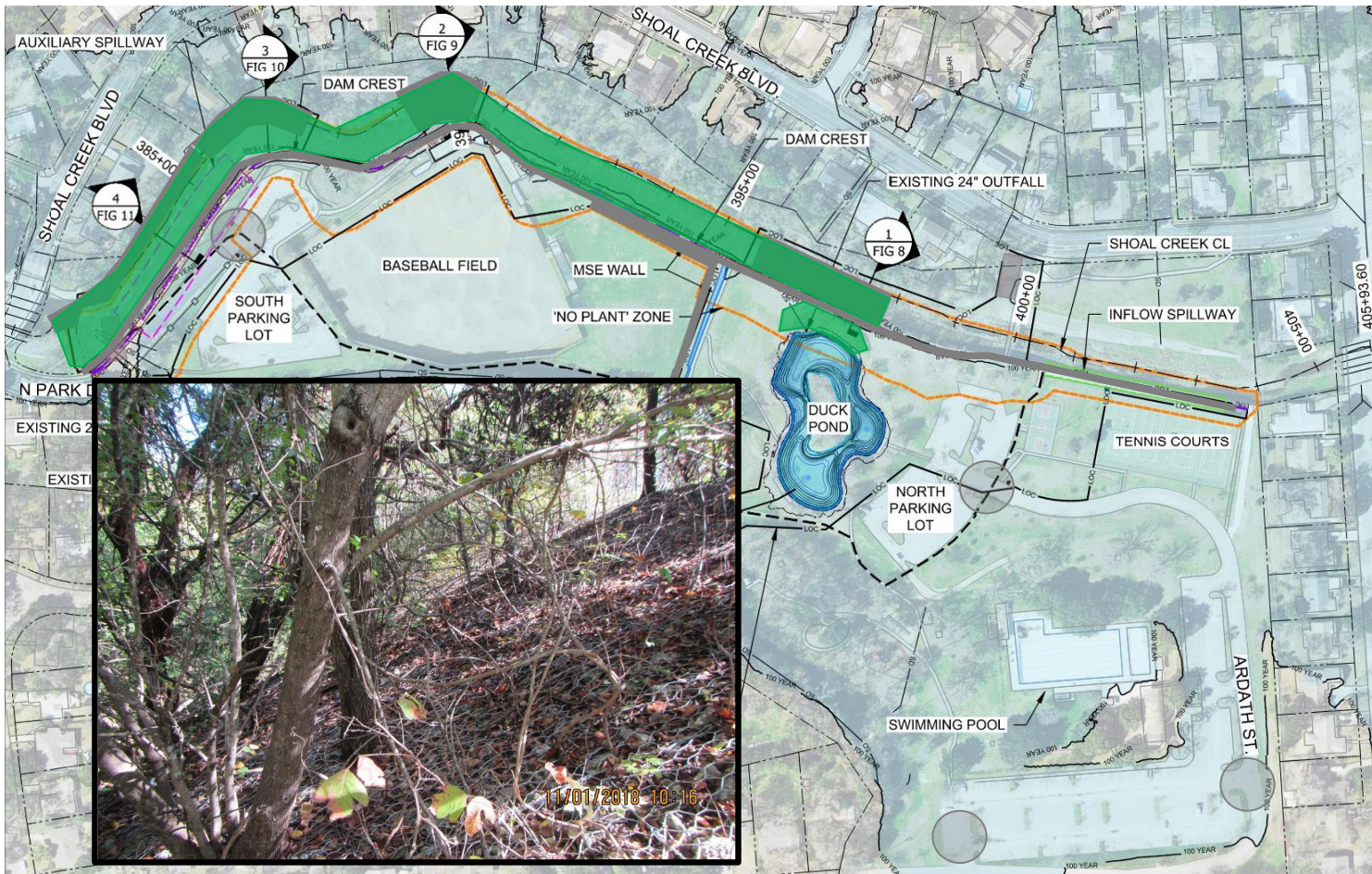


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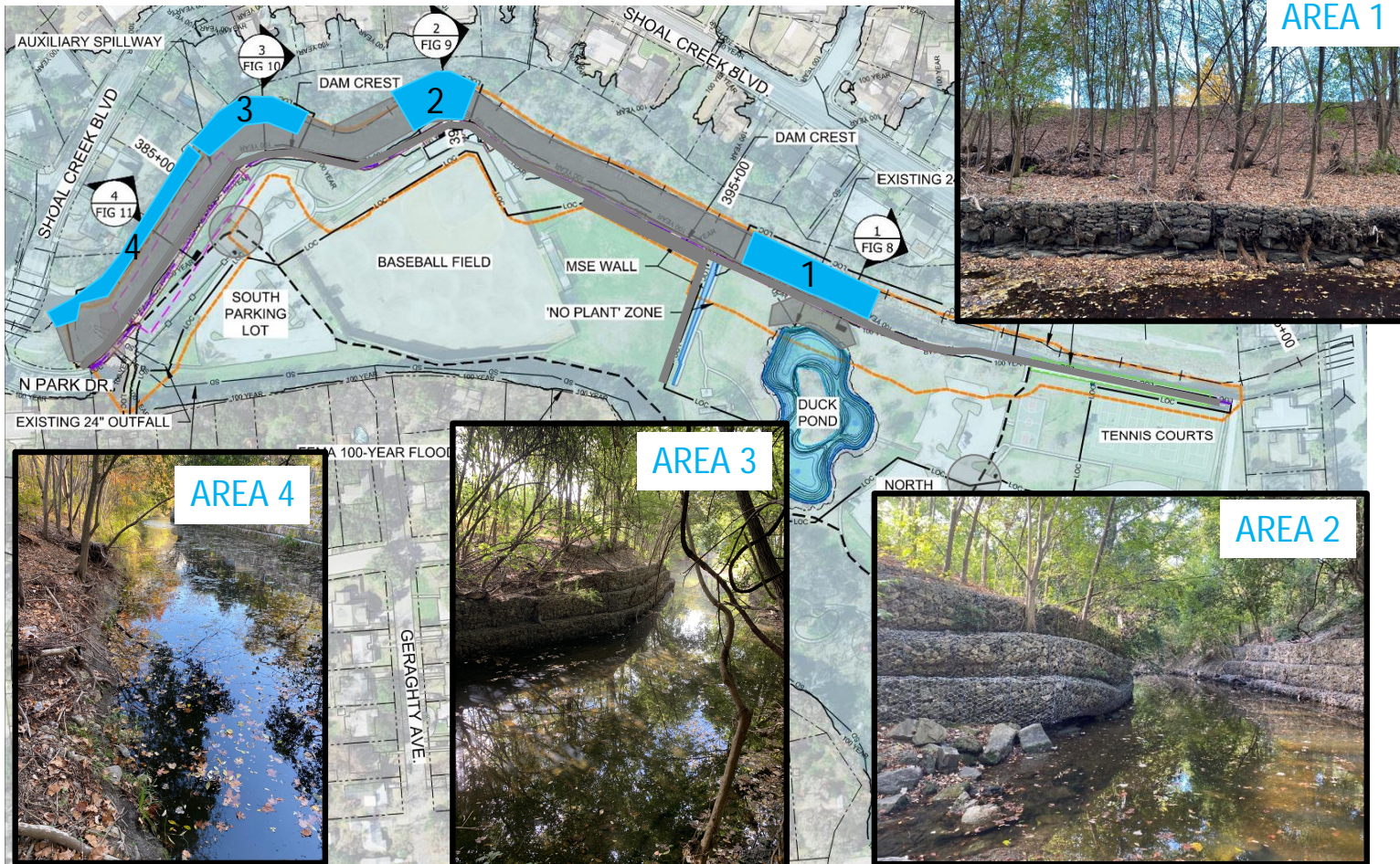
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Dam Safety Improvements



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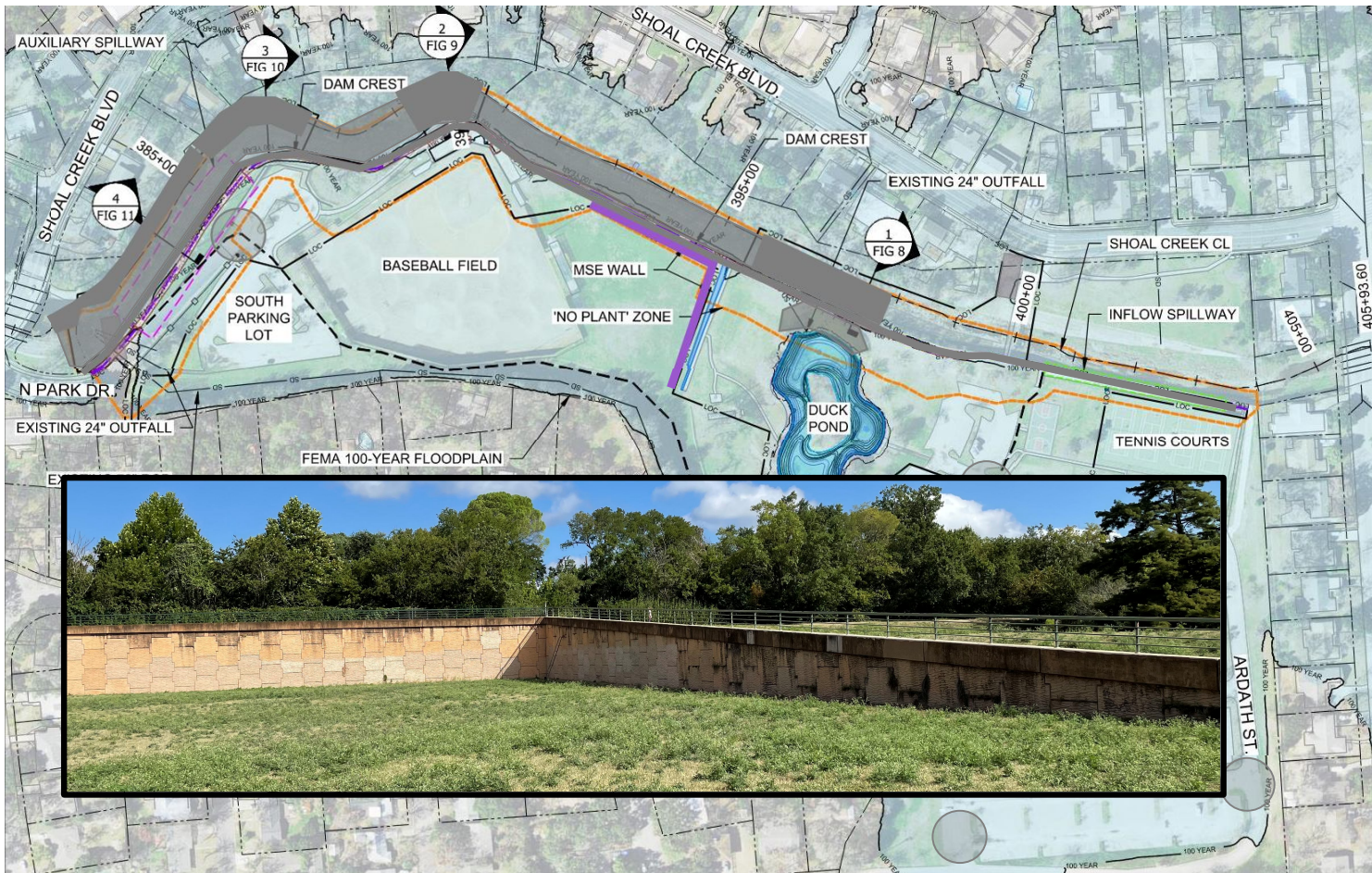


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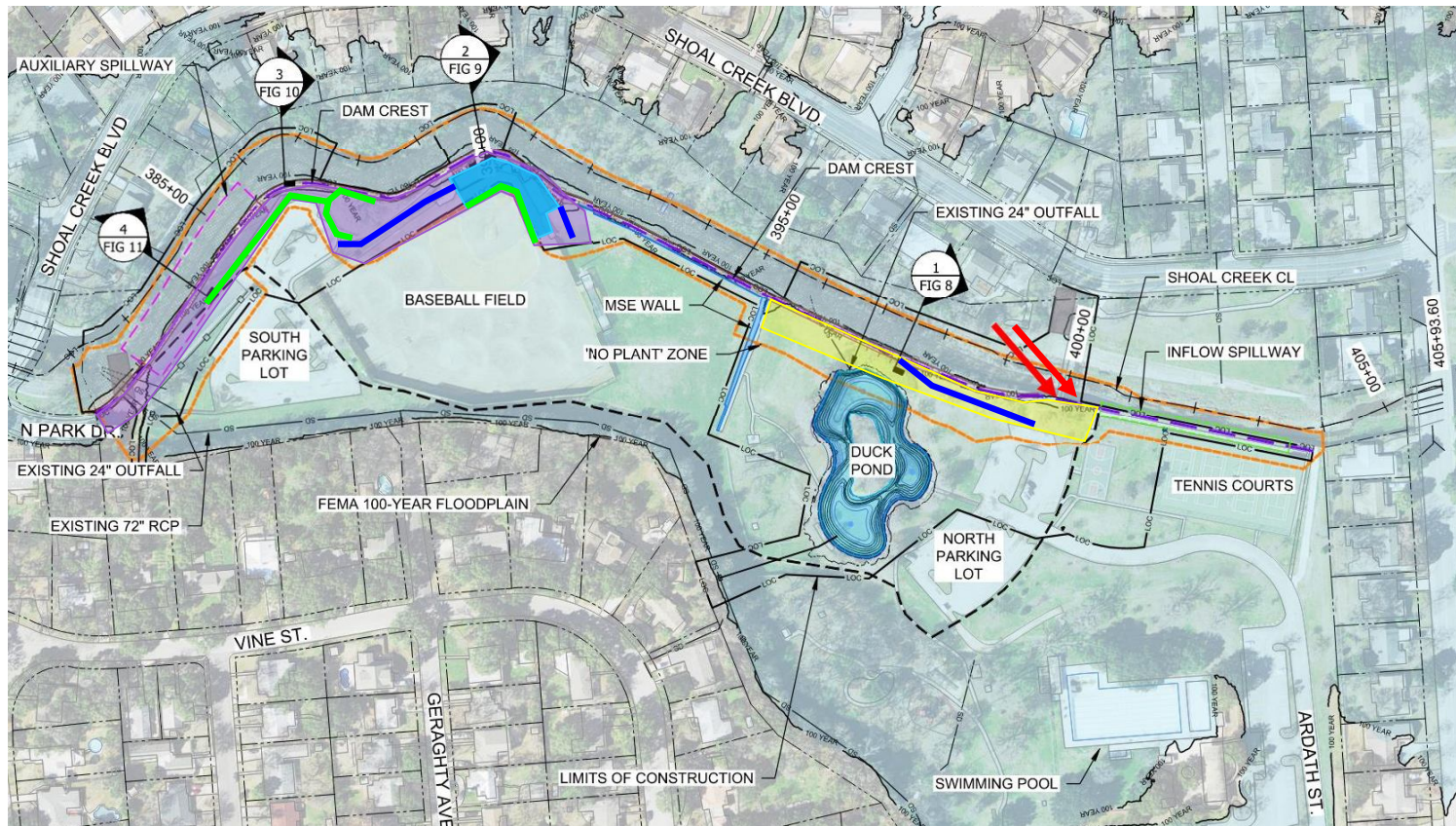
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Dam Maintenance Improvements



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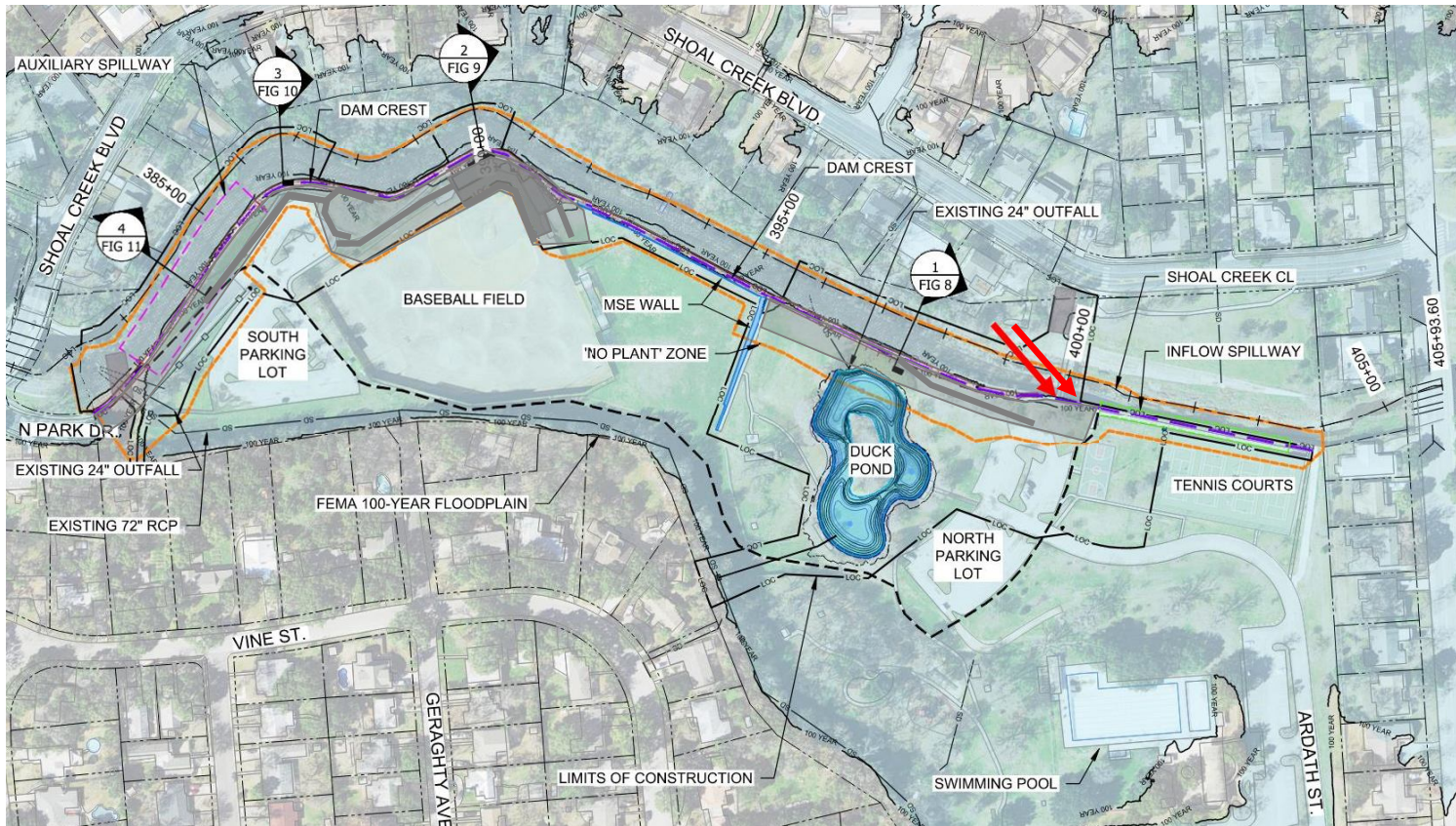
- PEDESTRIAN BRIDGE EXPANSION PLATES
- REMOVING IRRIGATION SYSTEM IN EMBANKMENT
- POST-INSTALL DRAINAGE AND SEALING CRACKS/JOINTS FOR RETAINING WALLS
- STABILIZE BASEBALL STRUCTURES**
- EROSION FOOT TRAFFIC WALKWAYS**
- LOCAL EROSION REPAIR**

** Items Correlated with
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Dam Maintenance Improvements

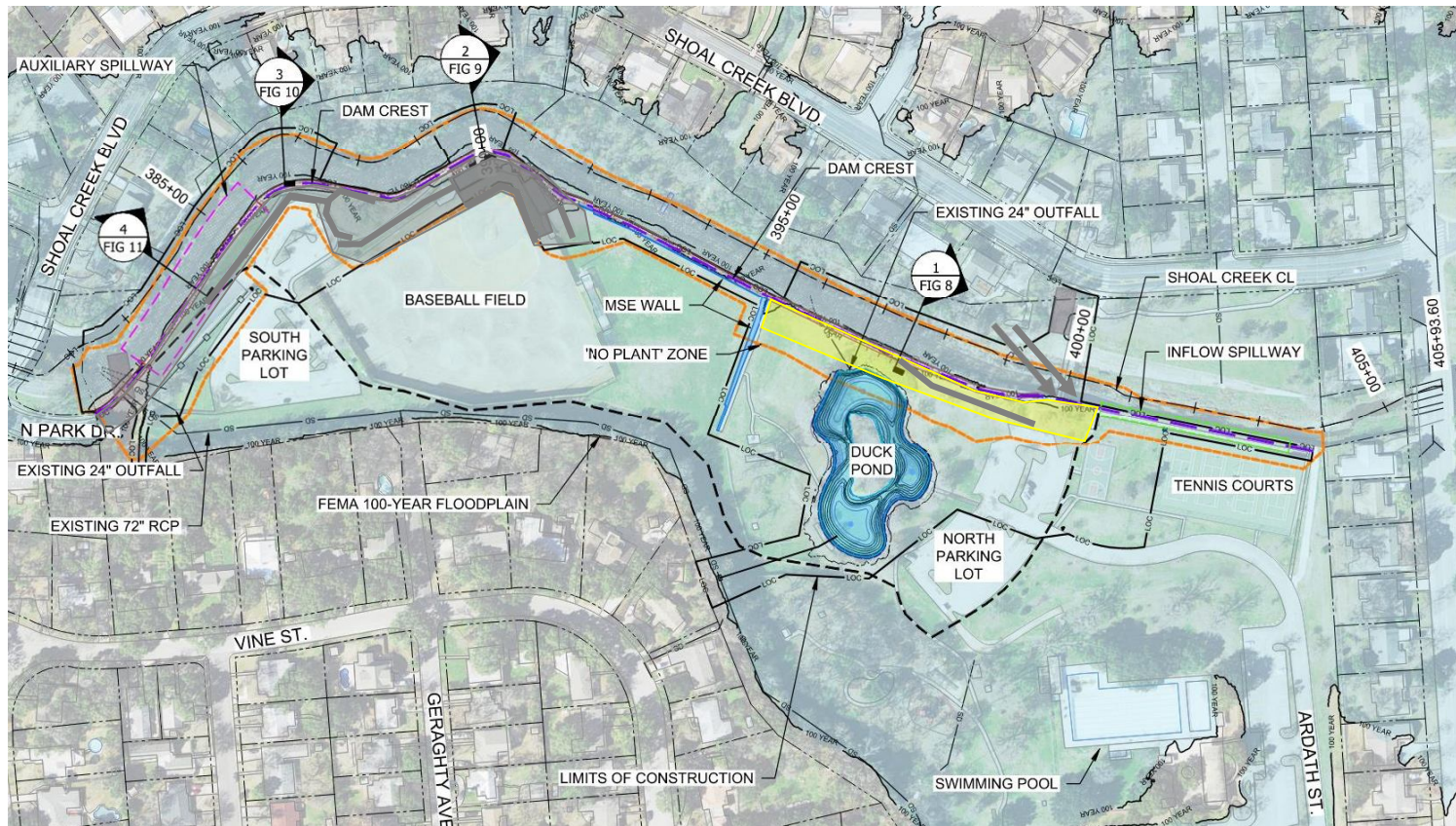


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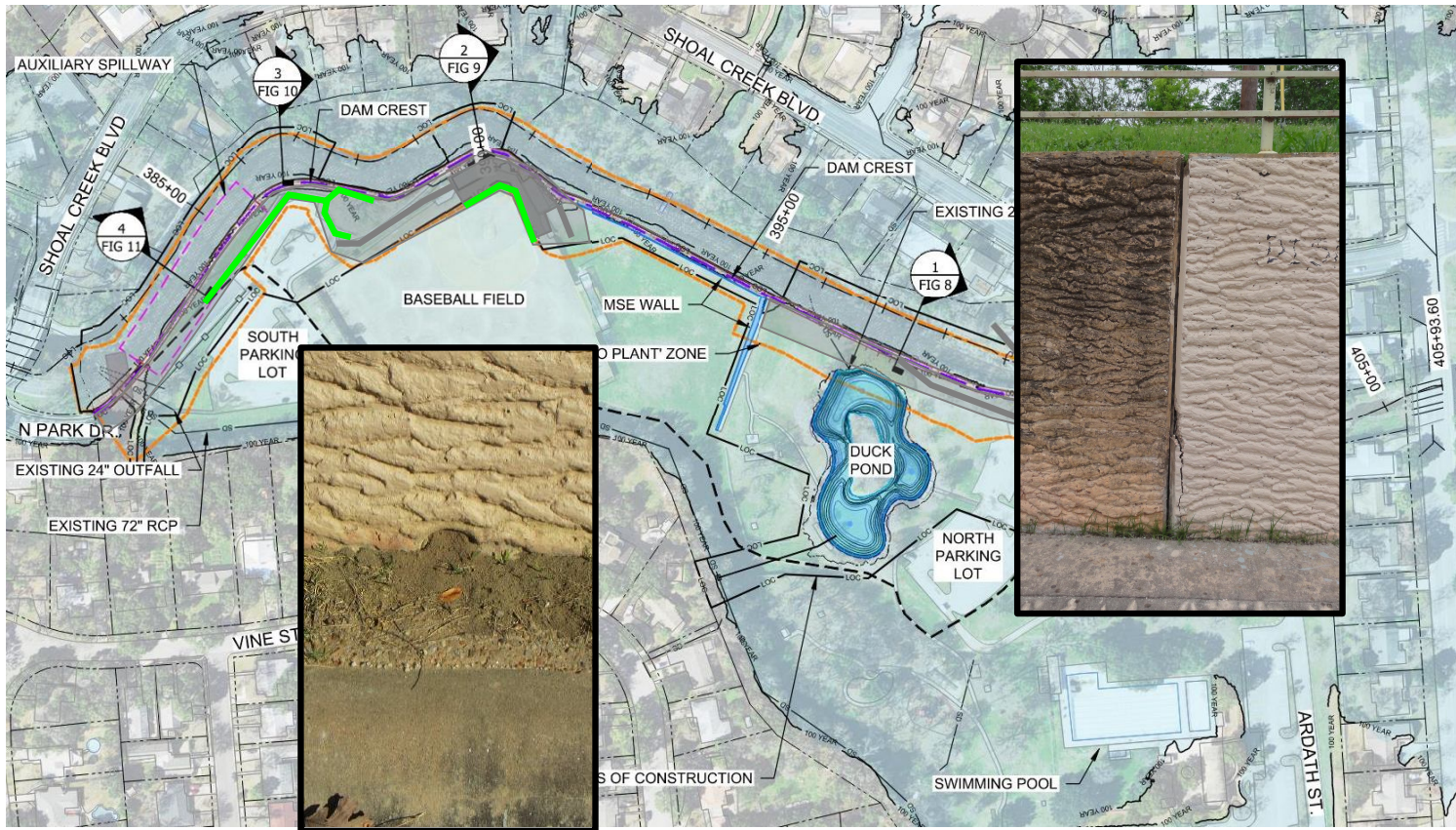


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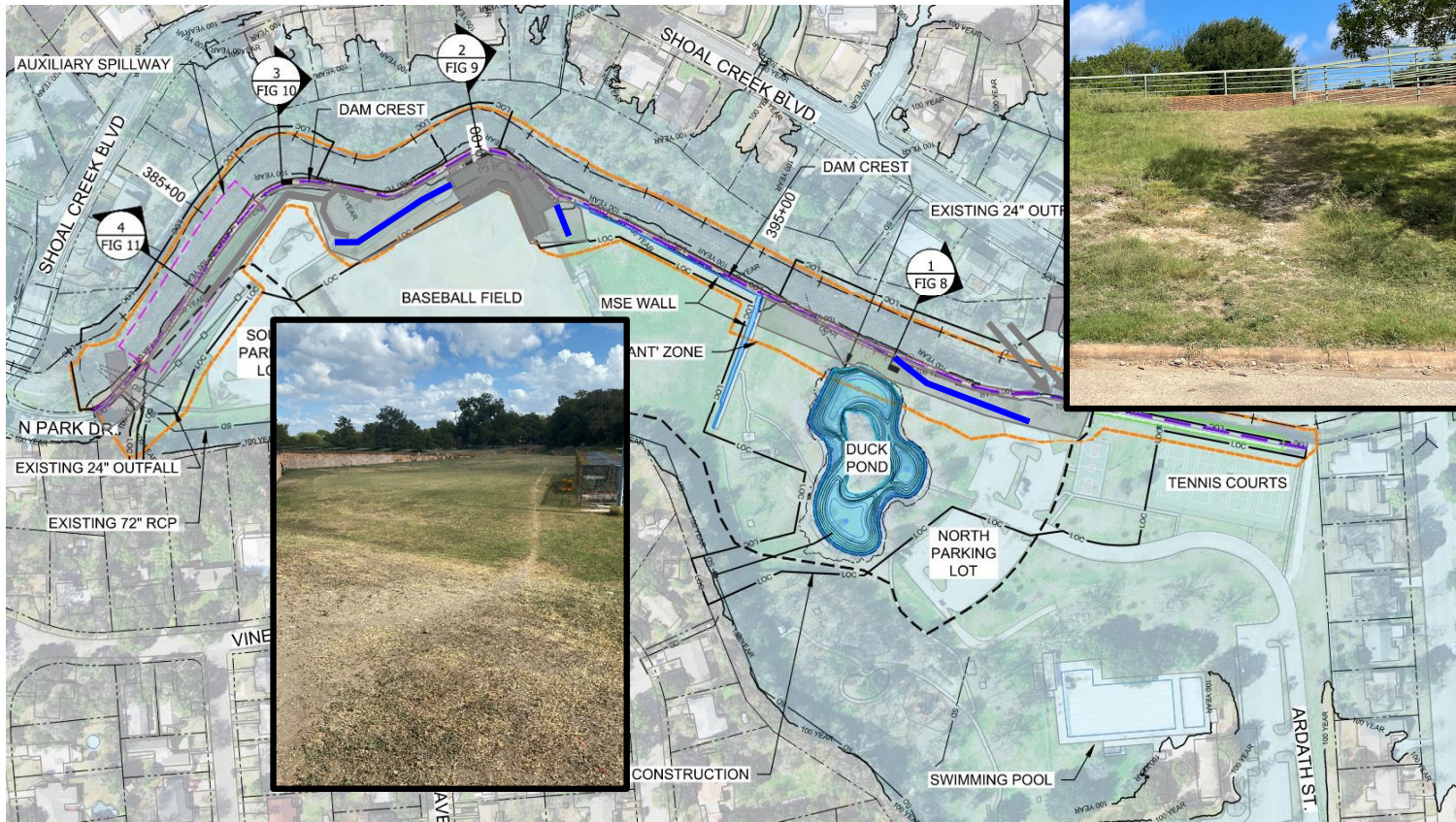
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Estimated Project Cost*



Dam Safety Improvements	\$2M
Dam Maintenance Improvements	\$1M
Total Project Cost	\$3M

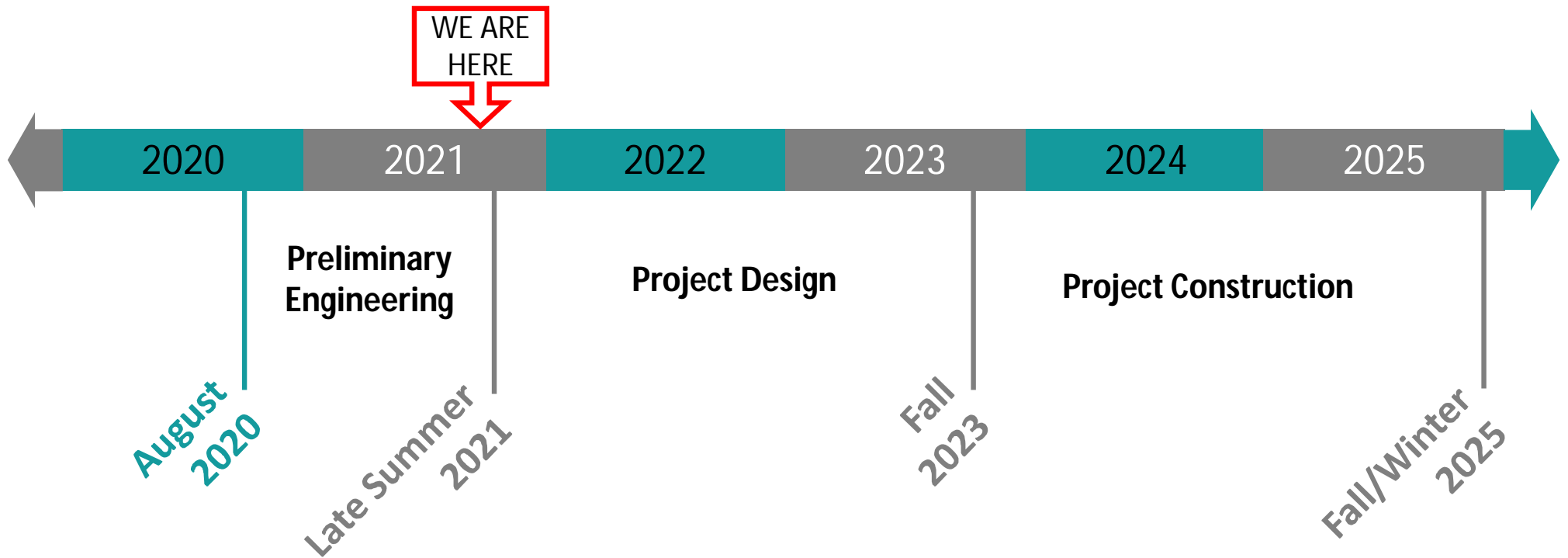
* Approximate Cost estimate based on the current phase



Project Timeline*



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* Estimate timeline based on the current phase



Questions?



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